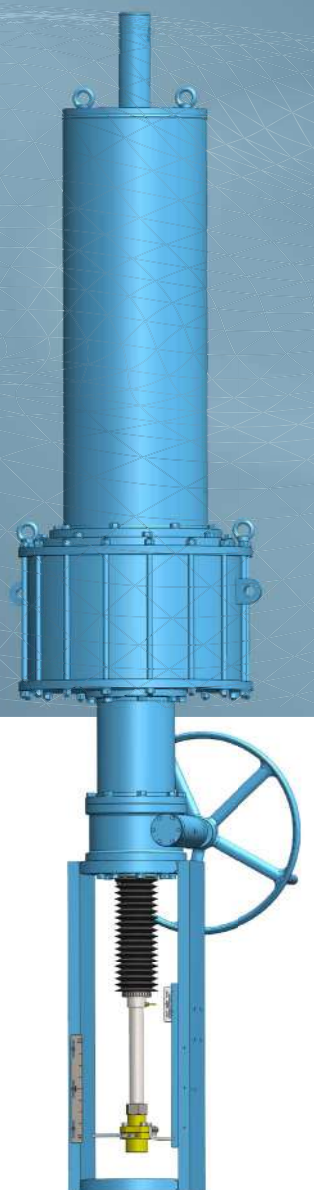


Single Acting **Piston Cylinder Actuators** **Series UA - 31 & 32**



Revolutionizing Flow Control

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Introduction

Series UA-31 & 32 single acting piston cylinder actuators are linear actuated type, that provides accurate throttling or on-off operation for Globe control valves, Gate valves, Louvers, Dampers.

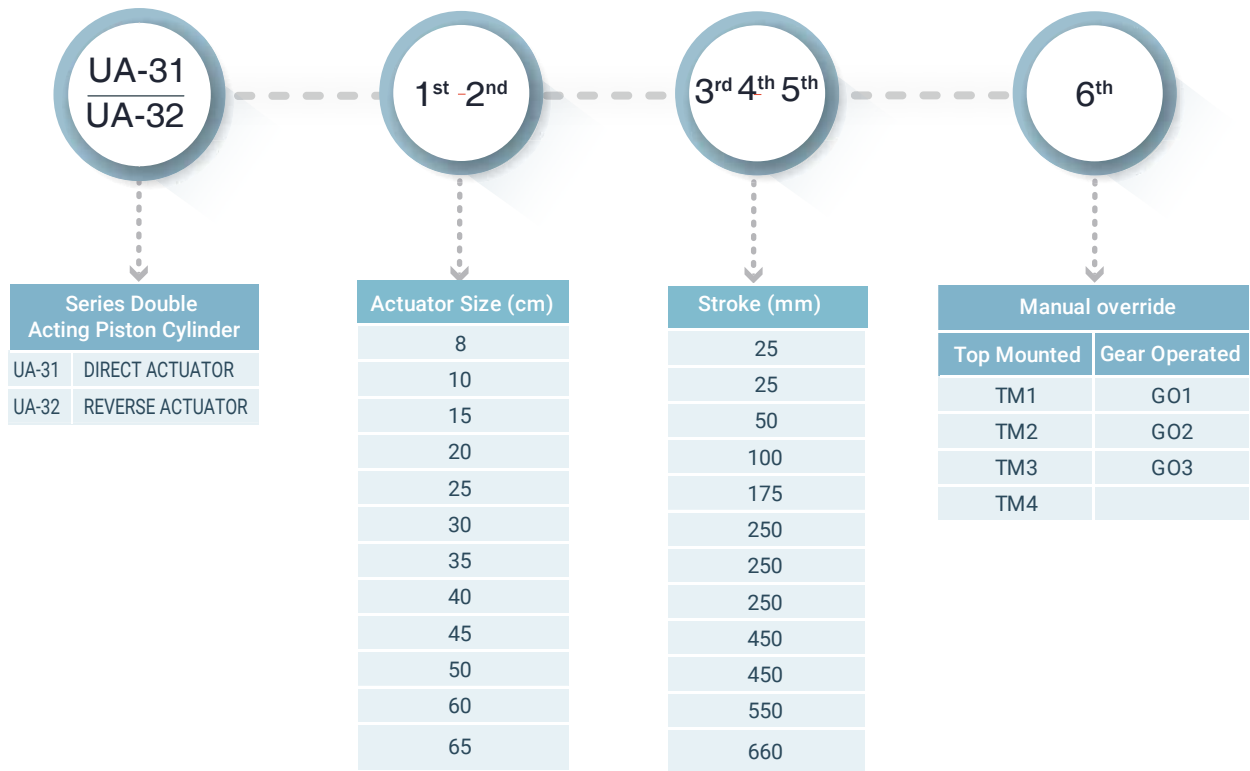
Main Features

- Stable piston arrangement with PTFE wear rings
- Optimised weight to thrust ratios
- Design validated by cyclic operational tests
- Perfect sealing
- High thrust capability of using air supplies up to 10 bar
- Multi-size options with long stroke capability
- Honed and hard chrome plated cylinders
- Stem protective gaiters also available
- Better ergonomics and effortless operation

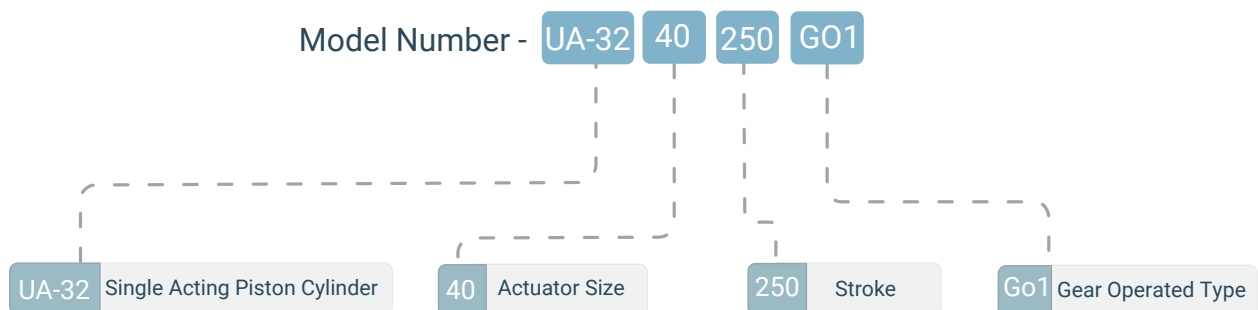


Model Numbering Method

Series UA-31 & 32 Actuators Code



Sample Model Numbering



General Description

Actuator Size	Refer table - 1
Operating Pressure	Minimum - 0.3 Kg/cm ²
	Maximum - 10 Kg/Cm ²
Actuator Thrust	Refer table - 3
Effective Piston Area	Refer table - 1
Cylinder Material	Seamless carbon steel pipe with honed & hard chrome plated
High Frequency Response	The double acting construction allows quick response to instrument signals.
Ambient Condition	Nitrile seal/ PTFE wear ring - 20 C to 80 C
	Viton seal/ PTFE wear ring - 20 C to 180 C
	EPDM seal/ PTFE wear ring - 40 C to 140 C
Travel / Stroke	Refer table - 1
Handwheels	Size 8 Cm - 20 Cm actuators are available with a top-mounted handwheel. All other actuator sizes can accommodate a gear operated side-mounted handwheel.(Refer table - 3)
Special Applications	Marine, Offshore services
Operating Supply Gases	Air, Other gases(optional)
Service	On-Off and Regulating service
Pneumatic Connection	Size up to size- 20 Cm comes with ¼" NPT (F) Other sizes come with ½" NPT (F)

Technical Data | Table-1

Actuator Size	Actuator Stem Dia	Effective Piston Area		Travel / Stroke (Max)	
		in ²	mm ²	Inches	mm
8	10	8.8	5675	1	25
10	20	13.4	8659	1	25
15	20	29.2	18869	2	50
20	20	51.2	33006	4	100
25	24	79.2	51071	7	175
30	32	113	73062	10	250
35	32	136.6	88141	10	250
40	40	185	119459	10	250
45	44	235.7	152053	18	450
50	46	286	184517	18	450
60	55	423.8	273397	22	550
65	55	498.6	321699	26	660

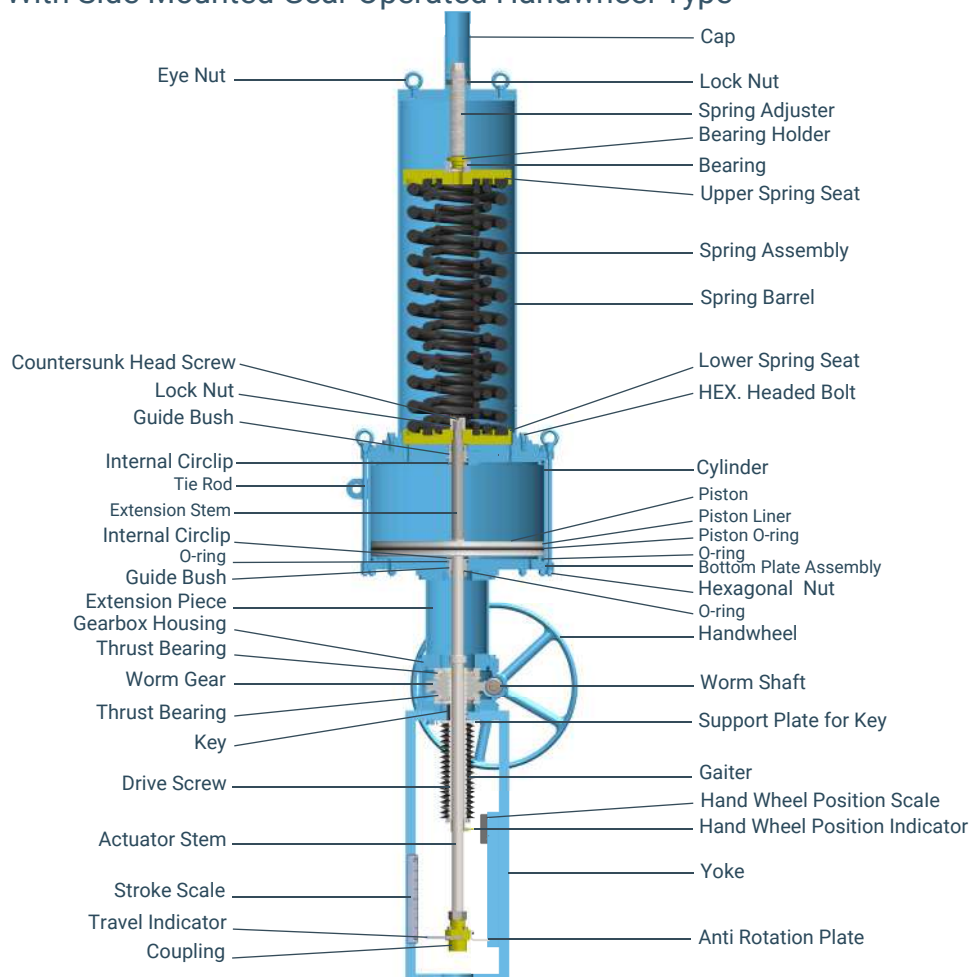
General Description

Handwheel Selection | Table-2

Actuator Size	Max. Travel		Actuator Thrust (Max 10 bar)		Manual override
	cm	Inches	mm	N	
8	1	25	5107	1148	Top Mounted Handwheel Type
10	1	25	7793	1752	
15	2	50	16982	3818	
20	4	100	29706	6678	
25	7	175	45963	10333	Gear Operated Handwheel Type
30	10	250	65755	14782	
35	10	250	79327	17833	
40	10	250	107513	24170	
45	18	450	136848	30765	
50	18	450	166065	37333	
60	22	550	246057	55316	
65	26	660	289529	65089	

Standard Construction

Series UA-32 With Side Mounted Gear Operated Handwheel Type



Technical Data | Series UA - 31

Available Thrust | Direct Action ATC (Air To Close) | Table-3

UVPL ACTUATOR SIZE	Effective Area (mm ²)	Stroke (mm)		Spring Range(bar)		Actuator Spring Range (N/mm)	Direct Action ATC (Air to close)															
							Actual Air Supply (bar) / Produced Force (N)															
							1.2	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10
8	5674	0.4	10	0.20	0.60	22.3	306	460	715	970	1226	1481	1736	1992	2247	2502	2758	3013	3269	3779	4290	4801
	5674	0.5	13	0.20	0.70	22.3	255	409	664	919	1175	1430	1685	1941	2196	2451	2707	2962	3217	3728	4239	4750
	5674	0.6	15	0.20	0.80	22.3	204	357	613	868	1124	1379	1634	1890	2145	2400	2656	2911	3166	3677	4188	4698
	5674	0.8	20	0.20	1.00	22.3	102	255	511	766	1021	1277	1532	1787	2043	2298	2554	2809	3064	3575	4086	4596
	5674	1.0	25	0.20	1.20	22.3		153	409	664	919	1175	1430	1685	1941	2196	2451	2707	2962	3473	3984	4494
10	8659	0.4	10	0.20	0.48	22.3	561	795	1185	1574	1964	2354	2743	3133	3522	3912	4302	4691	5081	5860	6640	7419
	8659	0.5	13	0.20	0.52	22.3	530	764	1153	1543	1933	2322	2712	3102	3491	3881	4271	4660	5050	5829	6609	7388
	8659	0.6	15	0.20	0.60	22.3	468	701	1091	1481	1870	2260	2650	3039	3429	3819	4208	4598	4988	5767	6546	7326
	8659	0.8	20	0.20	0.75	22.3	351	584	974	1364	1753	2143	2533	2922	3312	3702	4091	4481	4871	5650	6429	7209
	8659	1.0	25	0.20	0.86	22.3	265	499	888	1278	1668	2057	2447	2837	3226	3616	4006	4395	4785	5564	6344	7123
15	18869	0.4	10	0.20	0.60	67.0	1019	1528	2378	3227	4076	4925	5774	6623	7472	8321	9170	10020	10869	12567	14265	15963
	18869	0.5	13	0.20	0.65	67.0	934	1443	2293	3142	3991	4840	5689	6538	7387	8236	9086	9935	10784	12482	14180	15878
	18869	0.6	15	0.20	0.75	67.0	764	1274	2123	2972	3821	4670	5519	6368	7217	8067	8916	9765	10614	12312	14010	15709
	18869	0.8	20	0.20	0.91	67.0	492	1002	1851	2700	3549	4398	5248	6097	6946	7795	8644	9493	10342	12040	13739	15437
	18869	1.0	25	0.20	1.10	67.0	170	679	1528	2378	3227	4076	4925	5774	6623	7472	8321	9170	10020	11718	13416	15114
	18869	1.3	32	0.20	0.85	36.7	594	1104	1953	2802	3651	4500	5349	6199	7048	7897	8746	9595	10444	12142	13841	15539
	18869	1.5	38	0.20	0.95	36.7	425	934	1783	2632	3481	4330	5180	6029	6878	7727	8576	9425	10274	11973	13671	15369
18869	1.6	41	0.20	1.01	36.7	323	832	1681	2530	3379	4229	5078	5927	6776	7625	8474	9323	10172	11871	13569	15267	
20	33006	0.8	19	0.20	0.75	89.4	1337	2228	3713	5199	6684	8169	9654	11140	12625	14110	15596	17081	18566	21537	24507	27478
	33006	1.0	25	0.20	0.90	89.4	891	1782	3268	4753	6238	7723	9209	10694	12179	13665	15150	16635	18120	21091	24062	27032
	33006	0.8	19	1.35	2.20	146.9				891	2376	3862	5347	6832	8318	9803	11288	12773	14259	17229	20200	23170
	33006	1.3	32	0.20	1.25	110.2		743	2228	3713	5199	6684	8169	9654	11140	12625	14110	15596	17081	20051	23022	25993
	33006	1.6	41	0.20	1.60	110.2			1188	2674	4159	5644	7129	8615	10100	11585	13071	14556	16041	19012	21982	24953
	33006	1.5	38	0.40	1.00	52.0	594	1485	2971	4456	5941	7426	8912	10397	11882	13368	14853	16338	17823	20794	23765	26735
	33006	1.6	41	0.35	1.00	52.0	594	1485	2971	4456	5941	7426	8912	10397	11882	13368	14853	16338	17823	20794	23765	26735
	33006	2.0	51	0.20	1.00	52.0	594	1485	2971	4456	5941	7426	8912	10397	11882	13368	14853	16338	17823	20794	23765	26735
	33006	1.6	41	0.20	1.20	110.2		891	2376	3862	5347	6832	8318	9803	11288	12773	14259	15744	17229	20200	23170	26141

Technical Data | Series UA - 31

Available Thrust | Direct Action ATC (Air To Close) | Table-3

UVPL ACTUATOR SIZE	Effective Area (mm ²)	Stroke		Spring Range(bar)		Actuator Spring Range N/mm	Direct Action ATC (Air to close)															
							Actual Air Supply (bar) / Produced Force (N)															
							1.2	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10
25	51071	0.8	20	0.20	0.80	156.4	1839	3217	5516	7814	10112	12410	14708	17006	19305	21603	23901	26199	28497	33094	37690	42286
	51071	1.0	25	0.20	1.00	156.4	919	2298	4596	6895	9193	11491	13789	16087	18385	20684	22982	25280	27578	32174	36771	41367
	51071	1.3	32	0.20	0.90	110.2	1379	2758	5056	7354	9652	11951	14249	16547	18845	21143	23441	25740	28038	32634	37230	41827
	51071	1.5	38	0.20	1.00	110.2	919	2298	4596	6895	9193	11491	13789	16087	18385	20684	22982	25280	27578	32174	36771	41367
	51071	1.6	41	0.20	1.10	110.2	460	1839	4137	6435	8733	11031	13329	15628	17926	20224	22522	24820	27118	31715	36311	40907
	51071	1.7	43	0.20	0.95	86.7	1149	2528	4826	7124	9423	11721	14019	16317	18615	20913	23212	25510	27808	32404	37001	41597
	51071	2.0	51	0.20	1.05	86.7	689	2068	4367	6665	8963	11261	13559	15857	18156	20454	22752	25050	27348	31945	36541	41137
	51071	2.5	64	0.20	0.90	53.8	1379	2758	5056	7354	9652	11951	14249	16547	18845	21143	23441	25740	28038	32634	37230	41827
	51071	3.0	76	0.20	1.00	53.8	919	2298	4596	6895	9193	11491	13789	16087	18385	20684	22982	25280	27578	32174	36771	41367
	51071	3.5	89	0.20	0.90	40.2	1379	2758	5056	7354	9652	11951	14249	16547	18845	21143	23441	25740	28038	32634	37230	41827
51071	4.0	102	0.20	1.00	40.2	919	2298	4596	6895	9193	11491	13789	16087	18385	20684	22982	25280	27578	32174	36771	41367	
30	73062	0.8	20	0.20	0.85	223.4	2301	4274	7562	10850	14137	17425	20713	24001	27289	30576	33864	37152	40440	47015	53591	60166
	73062	1.0	25	0.20	1.00	223.4	1315	3288	6576	9863	13151	16439	19727	23014	26302	29590	32878	36166	39453	46029	52604	59180
	73062	1.3	32	0.20	0.85	146.9	2301	4274	7562	10850	14137	17425	20713	24001	27289	30576	33864	37152	40440	47015	53591	60166
	73062	1.5	38	0.20	1.00	146.9	1315	3288	6576	9863	13151	16439	19727	23014	26302	29590	32878	36166	39453	46029	52604	59180
	73062	1.6	41	0.20	1.05	146.9	986	2959	6247	9535	12822	16110	19398	22686	25973	29261	32549	35837	39125	45700	52276	58851
	73062	2.0	51	0.20	1.05	121.3	986	2959	6247	9535	12822	16110	19398	22686	25973	29261	32549	35837	39125	45700	52276	58851
	73062	2.5	64	0.20	0.90	80.6	1973	3945	7233	10521	13809	17096	20384	23672	26960	30248	33535	36823	40111	46686	53262	59838
	73062	3.0	76	0.20	1.00	80.6	1315	3288	6576	9863	13151	16439	19727	23014	26302	29590	32878	36166	39453	46029	52604	59180
	73062	3.5	89	0.20	0.95	60.3	1644	3617	6904	10192	13480	16768	20055	23343	26631	29919	33207	36494	39782	46358	52933	59509
	73062	4.0	102	0.20	1.05	60.3	986	2959	6247	9535	12822	16110	19398	22686	25973	29261	32549	35837	39125	45700	52276	58851
73062	5.0	127	0.20	0.90	38.2	1973	3945	7233	10521	13809	17096	20384	23672	26960	30248	33535	36823	40111	46686	53262	59838	
73062	6.0	152	0.20	1.00	38.2	1315	3288	6576	9863	13151	16439	19727	23014	26302	29590	32878	36166	39453	46029	52604	59180	
35	88141	0.8	20	0.20	0.85	268.1	2776	5156	9123	13089	17055	21022	24988	28954	32921	36887	40853	44820	48786	56719	64652	72584
	88141	1.0	25	0.20	1.00	268.1	1587	3966	7933	11899	15865	19832	23798	27765	31731	35697	39664	43630	47596	55529	63462	71394
	88141	1.3	32	0.20	0.85	183.7	2776	5156	9123	13089	17055	21022	24988	28954	32921	36887	40853	44820	48786	56719	64652	72584
	88141	1.5	38	0.20	1.00	183.7	1587	3966	7933	11899	15865	19832	23798	27765	31731	35697	39664	43630	47596	55529	63462	71394
	88141	1.6	41	0.20	1.05	183.7	1190	3570	7536	11502	15469	19435	23402	27368	31334	35301	39267	43233	47200	55132	63065	70998
	88141	2.0	51	0.20	1.00	138.6	1587	3966	7933	11899	15865	19832	23798	27765	31731	35697	39664	43630	47596	55529	63462	71394
	88141	2.5	64	0.20	0.90	94.1	2380	4760	8726	12692	16659	20625	24591	28558	32524	36491	40457	44423	48390	56322	64255	72188
	88141	3.0	76	0.20	1.02	94.1	1428	3808	7774	11740	15707	19673	23639	27606	31572	35539	39505	43471	47438	55370	63303	71236
	88141	3.5	89	0.20	0.91	70.4	2300	4680	8647	12613	16579	20546	24512	28478	32445	36411	40378	44344	48310	56243	64176	72108
	88141	4.0	102	0.20	1.01	70.4	1507	3887	7853	11820	15786	19752	23719	27685	31652	35618	39584	43551	47517	55450	63382	71315
	88141	5.0	127	0.20	0.85	44.6	2776	5156	9123	13089	17055	21022	24988	28954	32921	36887	40853	44820	48786	56719	64652	72584
	88141	6.0	152	0.20	0.97	44.6	1825	4204	8171	12137	16103	20070	24036	28002	31969	35935	39902	43868	47834	55767	63700	71632
	88141	7.0	178	0.20	0.93	35.9	2142	4522	8488	12454	16421	20387	24353	28320	32286	36253	40219	44185	48152	56084	64017	71950
	88141	8.0	203	0.20	1.03	35.9	1349	3728	7695	11661	15627	19594	23560	27527	31493	35459	39426	43392	47358	55291	63224	71156
88141	9.0	229	0.20	0.85	24.0	2776	5156	9123	13089	17055	21022	24988	28954	32921	36887	40853	44820	48786	56719	64652	72584	
88141	10	254	0.20	1.04	24.0	1269	3649	7615	11582	15548	19514	23481	27447	31414	35380	39346	43313	47279	55212	63144	71077	

Technical Data | Series UA - 31

Available Thrust | Direct Action ATC (Air To Close) | Table-3

UVPL ACTUATOR SIZE	Effective Area (mm ²)	Stroke (mm)		Spring Range(bar)		Actuator Spring Range (N/mm)	Direct Action ATC (Air to close)															
							Actual Air Supply (bar) / Produced Force (N)															
							1.2	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10
40	119459	0.8	20	0.20	0.80	335.1	4301	7526	12902	18277	23653	29029	34404	39780	45156	50531	55907	61282	66658	77409	88161	98912
	119459	1.0	25	0.20	0.90	335.1	3225	6451	11826	17202	22578	27953	33329	38705	44080	49456	54832	60207	65583	76334	87086	97837
	119459	1.3	32	0.20	0.90	257.1	3225	6451	11826	17202	22578	27953	33329	38705	44080	49456	54832	60207	65583	76334	87086	97837
	119459	1.5	38	0.20	1.02	257.1	1935	5161	10536	15912	21288	26663	32039	37415	42790	48166	53542	58917	64293	75044	85795	96547
	119459	1.6	41	0.20	1.10	257.1	1075	4301	9676	15052	20427	25803	31179	36554	41930	47306	52681	58057	63433	74184	84935	95687
	119459	2.0	51	0.20	0.95	173.3	2688	5913	11289	16665	22040	27416	32792	38167	43543	48918	54294	59670	65045	75797	86548	97299
	119459	2.5	64	0.20	0.85	121.0	3763	6988	12364	17740	23115	28491	33867	39242	44618	49994	55369	60745	66121	76872	87623	98375
	119459	3.0	76	0.20	1.00	121.0	2150	5376	10751	16127	21503	26878	32254	37630	43005	48381	53757	59132	64508	75259	86011	96762
	119459	3.5	89	0.20	0.95	100.5	2688	5913	11289	16665	22040	27416	32792	38167	43543	48918	54294	59670	65045	75797	86548	97299
	119459	4.0	102	0.20	1.05	100.5	1613	4838	10214	15589	20965	26341	31716	37092	42468	47843	53219	58595	63970	74722	85473	96224
	119459	5.0	127	0.20	0.88	63.7	3440	6666	12041	17417	22793	28168	33544	38920	44295	49671	55047	60422	65798	76549	87301	98052
	119459	6.0	152	0.20	1.02	63.7	1935	5161	10536	15912	21288	26663	32039	37415	42790	48166	53542	58917	64293	75044	85795	96547
	119459	7.0	178	0.20	0.92	47.9	3010	6236	11611	16987	22363	27738	33114	38490	43865	49241	54617	59992	65368	76119	86871	97622
	119459	8.0	203	0.20	1.02	47.9	1935	5161	10536	15912	21288	26663	32039	37415	42790	48166	53542	58917	64293	75044	85795	96547
119459	9.0	229	0.20	0.93	38.3	2903	6128	11504	16880	22255	27631	33007	38382	43758	49134	54509	59885	65260	76012	86763	97514	
119459	10.0	254	0.20	1.02	38.3	1935	5161	10536	15912	21288	26663	32039	37415	42790	48166	53542	58917	64293	75044	85795	96547	
45	152053	0.8	20	0.20	0.60	402.1	8211	12316	19159	26001	32843	39686	46528	53371	60213	67055	73898	80740	87583	101267	114952	128637
	152053	1.0	25	0.20	0.75	402.1	6158	10264	17106	23948	30791	37633	44476	51318	58160	65003	71845	78687	85530	99215	112899	126584
	152053	1.6	41	0.20	1.10	330.6	1368	5474	12316	19159	26001	32843	39686	46528	53371	60213	67055	73898	80740	94425	108110	121795
	152053	2.0	51	0.20	0.95	225.3	3421	7527	14369	21211	28054	34896	41739	48581	55423	62266	69108	75951	82793	96478	110162	123847
	152053	3.0	76	0.20	1.00	161.3	2737	6842	13685	20527	27370	34212	41054	47897	54739	61581	68424	75266	82109	95793	109478	123163
	152053	4.0	102	0.20	1.01	120.6	2600	6706	13548	20390	27233	34075	40917	47760	54602	61445	68287	75129	81972	95657	109341	123026
	152053	5.0	127	0.20	0.85	76.4	4790	8895	15737	22580	29422	36265	43107	49949	56792	63634	70477	77319	84161	97846	111531	125216
	152053	6.0	152	0.20	0.95	76.4	3421	7527	14369	21211	28054	34896	41739	48581	55423	62266	69108	75951	82793	96478	110162	123847
	152053	7.0	178	0.20	0.90	59.9	4105	8211	15053	21896	28738	35580	42423	49265	56108	62950	69792	76635	83477	97162	110847	124531
	152053	8.0	203	0.20	1.00	59.9	2737	6842	13685	20527	27370	34212	41054	47897	54739	61581	68424	75266	82109	95793	109478	123163
	152053	9.0	229	0.20	0.84	47.9	4927	9032	15874	22717	29559	36402	43244	50086	56929	63771	70613	77456	84298	97983	111668	125353
152053	10.0	254	0.20	0.91	47.9	3969	8074	14916	21759	28601	35444	42286	49128	55971	62813	69656	76498	83340	97025	110710	124395	
50	184745	0.8	20	0.20	0.75	491.5	7482	12470	20784	29097	37411	45724	54038	62352	70665	78979	87292	95606	103919	120546	137173	153800
	184745	1.0	25	0.20	0.90	491.5	4988	9976	18290	26603	34917	43230	51544	59857	68171	76485	84798	93112	101425	118052	134679	151306
	184745	1.6	41	0.20	1.00	367.3	3325	8314	16627	24941	33254	41568	49881	58195	66508	74822	83135	91449	99762	116390	133017	149644
	184745	2.0	51	0.20	0.91	260.0	4822	9810	18124	26437	34751	43064	51378	59691	68005	76318	84632	92945	101259	117886	134513	151140
	184745	3.0	76	0.20	0.98	188.2	3658	8646	16960	25273	33587	41900	50214	58527	66841	75154	83468	91781	100095	116722	133349	149976
	184745	4.0	102	0.20	0.98	140.7	3658	8646	16960	25273	33587	41900	50214	58527	66841	75154	83468	91781	100095	116722	133349	149976
	184745	5.0	127	0.20	0.82	89.2	6318	11306	19620	27933	36247	44561	52874	61188	69501	77815	86128	94442	102755	119382	136009	152637
	184745	6.0	152	0.20	0.95	89.2	4157	9145	17458	25772	34086	42399	50713	59026	67340	75653	83967	92280	100594	117221	133848	150475
	184745	7.0	178	0.20	0.90	71.9	4988	9976	18290	26603	34917	43230	51544	59857	68171	76485	84798	93112	101425	118052	134679	151306
	184745	8.0	203	0.20	1.00	71.9	3325	8314	16627	24941	33254	41568	49881	58195	66508	74822	83135	91449	99762	116390	133017	149644
	184745	9.0	229	0.20	0.91	57.5	4822	9810	18124	26437	34751	43064	51378	59691	68005	76318	84632	92945	101259	117886	134513	151140
184745	10.0	254	0.20	1.00	57.5	3325	8314	16627	24941	33254	41568	49881	58195	66508	74822	83135	91449	99762	116390	133017	149644	

Technical Data | Series UA - 31

Available Thrust | Direct Action ATC (Air To Close) | Table-3

UVPL ACTUATOR SIZE	Effective Area (mm ²)	Stroke		Spring Range(bar)		Actuator Spring Range N/mm	Direct Action ATC (Air to close)															
							Actual Air Supply (bar) / Produced Force (N)															
							1.2	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	8	9	10
60	273397	0.8	20	0.20	0.65	625.5	13533	20915	33218	45521	57823	70126	82429	94732	107035	119338	131641	143944	156246	180852	205458	230064
	273397	1.0	25	0.20	0.80	625.5	9842	17224	29527	41830	54133	66435	78738	91041	103344	115647	127950	140253	152556	177161	201767	226373
	273397	1.6	41	0.20	1.00	551.0	4921	12303	24606	36909	49211	61514	73817	86120	98423	110726	123029	135332	147634	172240	196846	221452
	273397	2.0	51	0.20	0.91	381.3	7136	14517	26820	39123	51426	63729	76032	88335	100637	112940	125243	137546	149849	174455	199060	223666
	273397	3.0	76	0.20	0.95	268.8	6151	13533	25836	38139	50442	62745	75048	87350	99653	111956	124259	136562	148865	173470	198076	222682
	273397	4.0	102	0.20	0.95	201.0	6151	13533	25836	38139	50442	62745	75048	87350	99653	111956	124259	136562	148865	173470	198076	222682
	273397	5.0	127	0.20	0.74	114.7	11319	18700	31003	43306	55609	67912	80215	92518	104820	117123	129426	141729	154032	178638	203243	227849
	273397	6.0	152	0.20	0.84	51.0	8858	16240	28543	40846	53148	65451	77754	90057	102360	114663	126966	139268	151571	176177	200783	225389
	273397	7.0	178	0.20	0.8	89.9	10211	17593	29896	42199	54502	66805	79107	91410	103713	116016	128319	140622	152925	177530	202136	226742
	273397	8.0	203	0.20	0.87	89.9	8120	15502	27804	40107	52410	64713	77016	89319	101622	113925	126227	138530	150833	175439	200045	224650
	273397	9.0	229	0.20	0.84	76.6	8858	16240	28543	40846	53148	65451	77754	90057	102360	114663	126966	139268	151571	176177	200783	225389
	273397	10.0	254	0.20	0.91	76.6	7136	14517	26820	39123	51426	63729	76032	88335	100637	112940	125243	137546	149849	174455	199060	223666

Technical Data | Series UA - 32

Available Thrust | Reverse Action ATO (Air To Open) | Table-4

UVPL ACTUATOR SIZE	Effective Area	Stroke		Spring Ranges (bar)		Actuator Spring Range	Reverse Action	
							ATO(Air To Open)	
	(mm ²)	IN	(mm)	Initial	Final	N/mm	Min.Air Supply (bar)	Force (N)
8	5675	0.5	13	0.40	0.90	22.3	1.2	204
	5675	0.5	13	0.80	1.30	22.3	1.6	409
	5675	0.5	13	1.20	2.10	36.7	2.4	613
	5675	0.5	13	1.60	2.50	36.7	2.8	817
	5675	0.5	13	2.00	2.90	36.7	3.2	1021
	5675	0.5	13	2.25	3.25	36.7	3.6	1149
	5675	0.8	20	0.40	1.20	22.3	1.5	204
	5675	0.8	20	0.80	2.10	36.7	2.4	409
	5675	0.8	20	1.20	2.50	36.7	2.8	613
	5675	0.8	20	1.60	2.90	36.7	3.2	817
	5675	0.8	20	1.95	3.25	36.7	3.6	996
	5675	1.0	25	0.40	1.40	22.3	1.7	204
	5675	1.0	25	0.80	2.45	36.7	2.8	409
	5675	1.0	25	1.20	2.85	36.7	3.2	613
	5675	1.0	25	1.60	3.25	36.7	3.6	817
10	8659	0.5	13	1.60	2.20	36.7	2.5	1247
	8659	1.0	25	1.20	2.10	17.3	2.4	935
15	18869	0.8	20	0.80	1.75	89.4	2.1	1359
	18869	0.8	20	1.20	2.40	110.2	2.7	2038
	18869	0.8	20	1.60	2.80	110.2	3.1	2717
	18869	0.8	20	2.00	3.60	146.9	3.9	3396
	18869	0.8	20	2.40	4.00	146.9	4.3	4076
	18869	1.0	25	0.80	2.30	110.2	2.6	1359
	18869	1.0	25	1.20	2.70	110.2	3.0	2038
	18869	1.0	25	1.60	3.60	146.9	3.9	2717
	18869	1.0	25	2.00	4.00	146.9	4.3	3396
	18869	1.5	38	0.40	2.70	110.2	3.0	679
	18869	1.5	38	0.80	3.05	110.2	3.4	1359
	18869	1.5	38	1.20	2.05	27.5	2.4	2038
	18869	1.5	38	1.65	2.50	40.4	2.8	2802
	18869	1.5	38	1.80	2.45	30.3	2.8	3057

Technical Data | Series UA - 32

Available Thrust | Reverse Action ATO (Air To Open) | Table-4

UVPL ACTUATOR SIZE	Effective Area	Stroke		Spring Ranges (bar)		Actuator Spring Range	Reverse Action	
							ATO(Air To Open)	
	(mm ²)	IN	(mm)	Initial	Final	N/mm	Min.Air Supply (bar)	Force (N)
20	33006	0.8	20	1.60	2.75	183.7	3.1	4753
	33006	0.8	20	2.00	3.35	220.4	3.7	5941
	33006	1.0	25	1.20	2.60	183.7	2.9	3565
	33006	1.0	25	1.60	3.30	220.4	3.6	4753
	33006	1.0	25	2.00	2.85	110.2	3.2	5941
	33006	1.0	25	2.30	3.15	110.2	3.5	6832
	33006	1.0	25	2.80	3.85	137.7	4.2	8318
	33006	1.5	38	1.20	2.20	82.6	2.5	3565
	33006	1.5	38	1.60	2.90	110.2	3.2	4753
	33006	1.5	38	2.00	3.60	137.7	3.9	5941
	33006	1.5	38	2.30	3.90	137.7	4.2	6832
	33006	2.0	51	0.40	1.65	40.3	2.0	1188
	33006	2.0	51	0.80	2.10	82.6	2.4	2376
	33006	2.0	51	1.20	2.90	110.2	3.2	3565
	33006	2.0	51	1.60	3.70	137.7	4.0	4753
	33006	2.0	51	1.88	4.38	165.2	4.7	5585
25	51071	0.8	20	1.60	2.80	293.8	3.1	7354
	51071	0.8	20	2.00	3.30	330.6	3.6	9193
	51071	0.8	20	2.25	2.75	121.2	3.1	10342
	51071	0.8	20	3.00	3.65	161.6	4.0	13789
	51071	0.8	20	3.80	4.60	202.1	4.9	17466
	51071	1.0	25	2.00	2.85	165.2	3.2	9193
	51071	1.0	25	2.10	2.75	121.2	3.1	9652
	51071	1.0	25	2.80	3.65	161.6	4.0	12870
	51071	1.0	25	3.00	3.65	121.1	4.0	13789
	51071	1.0	25	3.20	3.65	90.8	4.0	14708
	51071	1.0	25	3.50	4.60	202.1	4.9	16087
	51071	1.0	25	3.80	4.55	202.1	4.9	17466
	51071	1.0	25	3.95	4.55	113.6	4.9	18156
	51071	1.5	38	1.50	2.50	137.7	2.8	6895
	51071	1.5	38	2.00	3.40	192.8	3.7	9193
	51071	1.5	38	2.40	3.65	161.6	4.0	11031
51071	1.5	38	2.70	3.65	121.1	4.0	12410	
51071	1.5	38	2.95	3.65	90.8	4.0	13559	

Technical Data | Series UA - 32

Available Thrust | Reverse Action ATO (Air To Open) | Table-4

UVPL ACTUATOR SIZE	Effective Area	Stroke		Spring Ranges (bar)		Actuator Spring Range	Reverse Action	
							ATO(Air To Open)	
	(mm ²)	IN	(mm)	Initial	Final	N/mm	Min.Air Supply (bar)	Force (N)
25	51071	1.5	38	3.05	4.60	202.1	4.9	14019
	51071	1.5	38	3.30	4.55	151.4	4.9	15168
	51071	1.5	38	3.70	4.55	113.6	4.9	17006
	51071	2.0	51	1.60	3.50	192.8	3.8	7354
	51071	2.0	51	1.80	4.00	220.3	4.3	8273
	51071	2.0	51	2.00	3.65	161.6	4.0	9193
	51071	2.0	51	2.40	3.65	121.1	4.0	11031
	51071	2.0	51	2.70	3.65	90.8	4.0	12410
	51071	2.0	51	2.55	4.60	202.1	4.9	11721
	51071	2.0	51	3.00	4.55	151.4	4.9	13789
	51071	2.0	51	3.40	4.55	113.6	4.9	15628
	51071	2.5	64	0.40	0.90	40.2	1.2	1839
	51071	2.5	64	0.80	2.50	137.7	2.8	3677
	51071	2.5	64	1.30	4.00	220.3	4.3	5975
	51071	2.5	64	1.60	3.65	161.6	4.0	7354
	51071	2.5	64	2.10	3.65	121.1	4.0	9652
	51071	2.5	64	2.50	3.65	90.8	4.0	11491
	51071	2.5	64	2.05	4.60	202.1	4.9	9423
	51071	2.5	64	2.65	4.55	151.4	4.9	12180
	51071	2.5	64	3.10	4.55	113.6	4.9	14249
	51071	3.0	76	0.35	2.00	110.2	2.3	1609
	51071	3.0	76	0.80	1.40	38.2	1.7	3677
	51071	3.0	76	1.20	3.65	161.6	4.0	5516
	51071	3.0	76	1.80	3.65	121.1	4.0	8273
	51071	3.0	76	2.30	3.65	90.8	4.0	10572
	51071	3.0	76	2.85	4.55	113.6	4.9	13100
	51071	3.5	89	0.65	1.20	31.9	1.5	2988
	51071	3.5	89	0.85	3.65	161.6	4.0	3907
	51071	3.5	89	1.20	2.90	98.1	3.2	5516
	51071	3.5	89	1.50	3.65	121.1	4.0	6895
	51071	3.5	89	2.05	3.65	90.8	4.0	9423
	51071	4.0	102	0.40	0.95	25.5	1.3	1839
51071	4.0	102	0.95	2.90	98.1	3.2	4367	
51071	4.0	102	1.20	3.65	121.1	4.0	5516	
51071	4.0	102	1.50	4.55	151.4	4.9	6895	
51071	4.0	102	1.80	3.65	90.8	4.0	8273	

Technical Data | Series UA - 32

Available Thrust | Reverse Action ATO (Air To Open) | Table-4

UVPL ACTUATOR SIZE	Effective Area	Stroke		Spring Ranges (bar)		Actuator Spring Range	Reverse Action	
							ATO(Air To Open)	
	(mm ²)	IN	(mm)	Initial	Final	N/mm	Min.Air Supply (bar)	Force (N)
30	73062	1.0	25	2.50	3.20	202.1	3.5	16439
	73062	1.0	25	3.00	3.85	242.5	4.2	19727
	73062	1.0	25	3.20	3.85	181.7	4.2	21042
	73062	1.0	25	3.50	4.50	212.0	4.8	23014
	73062	2.0	51	2.15	3.85	242.5	4.2	14137
	73062	2.0	51	2.50	4.50	282.9	4.8	16439
	73062	2.0	51	2.55	3.85	181.7	4.2	16768
	73062	2.0	51	2.90	3.85	136.3	4.2	19069
	73062	3.0	76	1.95	3.85	181.7	4.2	12822
	73062	3.0	76	2.40	3.85	136.3	4.2	15781
	73062	4.0	102	1.60	3.20	113.6	3.5	10521
	73062	4.0	102	1.95	3.85	136.3	4.2	12822
	73062	4.0	102	2.30	3.40	76.7	3.7	15124
	73062	5.0	127	0.50	1.35	49.1	1.7	3288
	73062	5.0	127	0.80	2.10	73.6	2.4	5260
	73062	5.0	127	1.20	3.20	113.6	3.5	7891
	73062	5.0	127	1.45	3.85	136.3	4.2	9535
	73062	5.0	127	1.70	2.85	64.0	3.2	11178
	73062	5.0	127	2.05	3.40	76.7	3.7	13480
	35	73062	6.0	152	0.40	1.60	57.3	1.9
73062		6.0	152	1.00	3.85	136.3	4.2	6576
73062		6.0	152	1.55	2.90	64.0	3.2	10192
73062		6.0	152	1.80	3.40	76.7	3.7	11836
88141		1.0	25	3.30	4.25	323.3	4.6	26178
88141		2.0	51	2.45	3.90	212.0	4.2	19435
88141		2.0	51	2.75	3.90	159.0	4.2	21815
88141		3.0	76	2.30	3.70	159.0	4.0	18245
88141		3.0	76	2.50	3.30	89.5	3.6	19832
88141		4.0	102	1.90	2.80	76.7	3.1	15072
88141	4.0	102	2.20	3.30	89.5	3.6	17452	
88141	5.0	127	2.00	3.30	89.5	3.6	15865	
88141	6.0	152	1.75	3.30	89.5	3.6	13882	

Technical Data | Series UA - 32

Available Thrust | Reverse Action ATO (Air To Open) | Table-4

UVPL ACTUATOR SIZE	Effective Area	Stroke		Spring Ranges (bar)		Actuator Spring Range	Reverse Action	
							ATO(Air To Open)	
	(mm ²)	IN	(mm)	Initial	Final	N/mm	Min.Air Supply (bar)	Force (N)
40	119459	1.0	25	2.50	3.15	323.3	3.5	26878
	119459	1.0	25	2.75	3.55	363.7	3.9	29566
	119459	1.0	25	3.05	3.95	404.1	4.3	32792
	119459	2.0	51	2.20	3.95	404.1	4.3	23653
	119459	2.0	51	2.60	3.50	204.4	3.8	27953
	119459	3.0	76	2.15	3.50	204.4	3.8	23115
	119459	3.0	76	2.35	3.10	115.1	3.4	25266
	119459	4.0	102	1.75	3.50	204.4	3.8	18815
	119459	4.0	102	1.85	2.75	102.3	3.1	19890
	119459	4.0	102	2.10	3.10	115.1	3.4	22578
	119459	5.0	127	1.65	2.75	102.3	3.1	17740
	119459	5.0	127	1.85	3.10	115.1	3.4	19890
	119459	6.0	152	1.40	2.75	102.3	3.1	15052
	119459	6.0	152	1.60	3.10	115.1	3.4	17202
45	152053	1.0	25	2.40	3.10	404.1	3.4	32843
	152053	1.0	25	2.65	3.40	444.5	3.7	36265
	152053	2.0	51	2.20	3.35	333.1	3.7	30107
	152053	2.0	51	2.55	3.40	249.8	3.7	34896
	152053	3.0	76	2.15	3.40	249.8	3.7	29422
	152053	4.0	102	1.70	3.40	249.8	3.7	23264
	152053	4.0	102	1.85	2.70	127.9	3.0	25317
	152053	5.0	127	1.60	2.70	127.9	3.0	21896
	152053	6.0	152	1.40	2.70	127.9	3.0	19159

Technical Data | Series UA - 32

Available Thrust | Reverse Action ATO (Air To Open) | Table-4

UVPL ACTUATOR SIZE	Effective Area	Stroke		Spring Ranges (bar)		Actuator Spring Range	Reverse Action	
							ATO(Air To Open)	
	(mm ²)	IN	(mm)	Initial	Final	N/mm	Min.Air Supply (bar)	Force (N)
50	184745	1.0	25	2.55	3.30	525.3	3.6	42399
	184745	2.0	51	2.20	3.30	393.6	3.6	36580
	184745	2.0	51	2.45	3.30	295.2	3.6	40736
	184745	3.0	76	2.05	3.30	295.2	3.6	34086
	184745	4.0	102	1.65	3.30	295.2	3.6	27435
	184745	4.0	102	1.85	2.10	153.5	2.4	30760
	184745	5.0	127	1.60	2.70	153.5	3.0	26603
	184745	6.0	152	1.40	2.70	153.5	3.0	23278
60	273397	1.0	25	1.85	2.40	565.7	2.7	45521
	273397	1.0	25	2.15	2.75	646.6	3.1	52902
	273397	2.0	51	1.85	2.75	484.5	3.1	45521
	273397	2.0	51	2.05	2.75	363.4	3.1	50442
	273397	3.0	76	1.70	2.75	363.4	3.1	41830
	273397	4.0	102	1.40	2.75	363.4	3.1	34448
	273397	4.0	102	1.55	2.25	191.9	2.6	38139
	273397	5.0	127	1.35	2.25	191.9	2.6	33218
	273397	6.0	152	1.15	2.25	191.9	2.6	28297
	273397	10.9	278	1.30	3.30	175.2	3.6	31987

- Positioner
- Limit switch
- Air pressure regulator
- Air lock relay
- Volume booster
- Quick exhaust valve
- Flow restrictor
- Back-up system with tank
- Junction Box for electrical terminations



UA-31 With out Hand wheel

Principle of Operation

Series UA-31 single acting direct actuator , Air to close action (ATC).

In this series, air pressure is applied to the top of the piston, which extends the actuator stem and allows the valve to close. If the supply or signal air pressure is interrupted, the actuator will retract its stem by means of spring action and allowing the valve to open.

Series UA-32 single acting reverse actuator , Air to open action (ATO).

In this series, air pressure is applied to the bottom of the piston, the stem retracts and the valve opens. If the supply or signal air pressure is interrupted, the actuator moves its stem to the extended position by means of spring action, allowing the valve to close.

Manual override

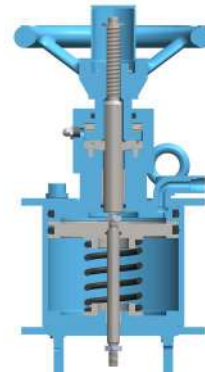
An optional handwheel manual override is capable of extending or retracting the actuator manually and can be engaged at any position from full open to full close.

Two types of hand wheel are available for fitting to the Series UA-31 & UA-32 range of piston cylinder actuators, as follows:

1. Top mounted handwheel
2. Side mounted gear operated handwheel

1. Top mounted hand wheel

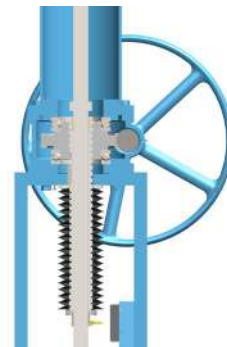
This hand wheel can be used to extend, or retract the stem as well as acting as either a high, or low limit stop. A neutral position is indicated on the mechanism when the actuator is in automatic operational mode. A neutral position is obtained with the handwheel screw in any position other than the indicated central neutral, providing a stop to limit travel in either direction.



Top mounted handwheel

2. Gear Operated hand wheel

Available throughout the range of actuator sizes up to UA-31 & 32 Size-60 (600mm) , the hand wheels are capable of providing forces in either direction. The gearing has been selected to ensure easy operation up to its maximum thrust capability (see Table-2 on page-4).





UNICORN VALVES

Revolutionizing Flow Control



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With continual development of our products, Unicorn Valves reserve the right to amend and change the design and/or specification without prior notice.

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